

- 1 -

## SEQUENCE LISTING

&lt;110&gt; Bayer AG

&lt;120&gt; NOVEL EIMERIA GENE AND PROTEIN, AND THEIR USE

&lt;130&gt; LeA 36695 DE

&lt;160&gt; 24

&lt;170&gt; PatentIn version 3.1

&lt;210&gt; 1

&lt;211&gt; 1186

&lt;212&gt; DNA

&lt;213&gt; Eimeria tenella

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (83) .. (679)

&lt;223&gt;

&lt;400&gt; 1

caggacccca aaataaaatc aaaggctatc acactatctt acttcttaac cgtttactga 60

ggctacaaga acaagtttga ag atg agg act atc cta gcc acc cta gtc ggt 112  
 Met Arg Thr Ile Leu Ala Thr Leu Val Gly  
 1 5 10

ttc aca gcc tgc gca gcc gtt gct gca gac gga gca cct gag tat cct 160  
 Phe Thr Ala Cys Ala Ala Val Ala Ala Asp Gly Ala Pro Glu Tyr Pro  
 15 20 25

tct cag ctt gca gtt gaa atc gat cca gaa gcg att att gcg atc cag 208  
 Ser Gln Leu Ala Val Glu Ile Asp Pro Glu Ala Ile Ile Ala Ile Gln  
 30 35 40

- 2 -

caa gat gca aac gcc gac cca cgt ctc ttt ttc cca ctg agc ggg ctt Gln Asp Ala Asn Ala Asp Pro Arg Leu Phe Phe Pro Leu Ser Gly Leu 45 50 55	256
gtc tcc gcc aaa ctt gcc aaa gtc ttt caa ccc aac ata tac cca acc Val Ser Ala Lys Leu Ala Lys Val Phe Gln Pro Asn Ile Tyr Pro Thr 60 65 70	304
cct cct agt ccc cag aca act tac cac ttt cac ctc cat cct cat ccc Pro Pro Ser Pro Gln Thr Tyr His Phe His Leu His Pro His Pro 75 80 85 90	352
cat tat ccg cat cct cag cca agt tat cct cat cct caa ccc cat cat His Tyr Pro His Pro Gln Pro Ser Tyr Pro His Pro Gln Pro His His 95 100 105	400
cct cat cct cat cct tat cat cct cat cct cat ccc cat cat cct cat Pro His Pro His Pro Tyr His Pro His Pro His Pro His His Pro His 110 115 120	448
cct cat ccc cat caa cat cct cat cgt cat ccc gac cat cat ccc cac Pro His Pro His Gln His Pro His Arg His Pro Asp His His Pro His 125 130 135	496
cat cat cct cac cat cat cat cat gaa cat aat gtt cat gtg cct caa His His Pro His His His His His Glu His Asn Val His Val Pro Gln 140 145 150	544
cat cag cac gct caa cac aac ggc cac cag aac aac ggt ggc cca gct His Gln His Ala Gln His Asn Gly His Gln Asn Asn Gly Gly Pro Ala 155 160 165 170	592
cat tat cac cat gac tac cat ttt gcg cat cct cat caa gag aac cag His Tyr His His Asp Tyr His Phe Ala His Pro His Gln Glu Asn Gln 175 180 185	640
cat cac cgc gag gaa gag cag ctt acc gac atc aac taa gctattggtc His His Arg Glu Glu Glu Gln Leu Thr Asp Ile Asn 190 195	689
gggaattaag gtgcttagtc tcagtagtca gtacagtact aggctacgtc tgagatcttc	749
atggcaaaga ggtaccagcc accaagctga ctgggctatg ttttattaga caaatttaaa	809
tttaaagggt cccagtttca gtctctgcag gtctgcccct gaaagcacga gaggggccta	869
aagggtgatt ggagctgcaa atacagctgc aaatgcagct gcaaagtgcc gcttcaaaaa	929
agggacaggc ttcccgccaa aatttttggga tcatacctat caatgcttcg agaaaacata	989
gaaaacaaaa gcactgaaga acgttcatag tcggtagttt taggggcatg ccgtgtgcta	1049
aatcccatc gaaccttcag gtacacctga tcgttacgaa gtacacacca ccggtcactc	1109
tcaacgcgca ccactagagc gagagctgct tcagggatgc agcgagatgt cgactcagag	1169
gtcctacatt aaaggga	1186

- 3 -

&lt;210&gt; 2

&lt;211&gt; 198

&lt;212&gt; PRT

<213> *Eimeria tenella*

&lt;400&gt; 2

Met Arg Thr Ile Leu Ala Thr Leu Val Gly Phe Thr Ala Cys Ala Ala  
 1 5 10 15  
 Val Ala Ala Asp Gly Ala Pro Glu Tyr Pro Ser Gln Leu Ala Val Glu  
 20 25 30  
 Ile Asp Pro Glu Ala Ile Ile Ala Ile Gln Gln Asp Ala Asn Ala Asp  
 35 40 45  
 Pro Arg Leu Phe Phe Pro Leu Ser Gly Leu Val Ser Ala Lys Leu Ala  
 50 55 60  
 Lys Val Phe Gln Pro Asn Ile Tyr Pro Thr Pro Pro Ser Pro Gln Thr  
 65 70 75 80  
 Thr Tyr His Phe His Leu His Pro His Pro His Tyr Pro His Pro Gln  
 85 90 95  
 Pro Ser Tyr Pro His Pro Gln Pro His His Pro His Pro His Pro Tyr  
 100 105 110  
 His Pro His Pro His Pro His His Pro His Pro His Pro His Gln His  
 115 120 125  
 Pro His Arg His Pro Asp His His Pro His His His Pro His His His  
 130 135 140  
 His His Glu His Asn Val His Val Pro Gln His Gln His Ala Gln His  
 145 150 155 160  
 Asn Gly His Gln Asn Asn Gly Gly Pro Ala His Tyr His His Asp Tyr  
 165 170 175  
 His Phe Ala His Pro His Gln Glu Asn Gln His His Arg Glu Glu Glu  
 180 185 190  
 Gln Leu Thr Asp Ile Asn  
 195

&lt;210&gt; 3

&lt;211&gt; 597

- 4 -

&lt;212&gt; DNA

<213> *Eimeria tenella*

&lt;400&gt; 3

atgaggacta tcctagccac cctagtcggt ttcacagcct gcgcagccgt tgctgcagac	60
ggagcacctg agtatccttc tcagcttgca gttgaaatcg atccagaagc gattattgcg	120
atccagcaag atgcaaacgc cgaccacgt ctctttttcc cactgagcgg gcttgtctcc	180
gccaaacttg ccaaagtctt tcaacccaac atatacccaa cccctcctag tccccagaca	240
acttaccact ttcacctcca tcctcatccc cattatccgc atcctcagcc aagttatcct	300
catcctcaac cccatcatcc tcatcctcat ccttatcatc ctcatcctca tccccatcat	360
cctcatcctc atccccatca acatcctcat cgtcatcccg accatcatcc ccaccatcat	420
cctcaccatc atcatcatga acataatggt catgtgcctc aacatcagca cgctcaacac	480
aacggccacc agaacaacgg tggcccagct cattatcacc atgactacca ttttgcgcat	540
cctcatcaag agaaccagca tcaccgcgag gaagagcagc ttaccgacat caactaa	597

&lt;210&gt; 4

&lt;211&gt; 25

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer A17-22-up

&lt;400&gt; 4

tcctcatcct tatcatcctc atcct

25

&lt;210&gt; 5

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

- 5 -

<223> Primer A17-112-lo

<400> 5  
gtgggggatga tggtcggg

18

<210> 6

<211> 33

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer A17-f-length-64-up

<400> 6  
caggacccca aaataaaatc aaaggctatc aca

33

<210> 7

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer A17-f-length-1176-lo

<400> 7  
tgaccggtgg tgtgtacttc gtaac

25

<210> 8

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer EtACTIN-up

<400> 8  
ctgtgagaag aaccggtgc tcttc

25

- 6 -

&lt;210&gt; 9

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer EtACTIN-1o

&lt;400&gt; 9

cgtgcgaaaa tgccggacga agag

24

&lt;210&gt; 10

&lt;211&gt; 32

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer A17-max-90-up

&lt;400&gt; 10

tgaggactat cctagccacc ctagtcggtt tc

32

&lt;210&gt; 11

&lt;211&gt; 32

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer A17-max-150-up

&lt;400&gt; 11

gagcacctga gtatccttct cagcttgag tt

32

&lt;210&gt; 12

- 7 -

&lt;211&gt; 32

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer A17-max-533-lo

&lt;400&gt; 12

tatgttcatg atgatgatgg tgaggatgat gg

32

&lt;210&gt; 13

&lt;211&gt; 32

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer A17-max-631-lo

&lt;400&gt; 13

aggatgcgca aaatggtagt catggtgata at

32

&lt;210&gt; 14

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer pG8SAET-up

&lt;400&gt; 14

taggtgtagg tattgcatct gtaactt

27

&lt;210&gt; 15

&lt;211&gt; 27

&lt;212&gt; DNA

- 8 -

<213> Artificial Sequence

<220>

<223> Primer pG8SAET-1o

<400> 15

cgatatattc ggtcgctgag gcttgca

27

<210> 16

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer pG8SAET-seq-up-140

<400> 16

atgatgactt tacaaatata tacaggg

27

<210> 17

<211> 32

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer A17-sequint-27-up

<400> 17

cgaggaagag cagcttaccg acatcaacta ag

32

<210> 18

<211> 32

<212> DNA

<213> Artificial Sequence



- 9 -

&lt;220&gt;

&lt;223&gt; Primer A17-sequent-44-up

&lt;400&gt; 18

ccgacatcaa ctaagctatt ggtcgggaat ta

32

&lt;210&gt; 19

&lt;211&gt; 32

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer A17-sequent-385-1o

&lt;400&gt; 19

atgaggataa tttggctgag gatgcggata at

32

&lt;210&gt; 20

&lt;211&gt; 32

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer A17-sequent-351-1o

&lt;400&gt; 20

ggatgaggat ggaggtgaaa gtggtagtt gt

32

&lt;210&gt; 21

&lt;211&gt; 17

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Primer M13 reverse

- 10 -

<400> 21  
cgagaaacag ctatgac

17

<210> 22

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer M13 forward

<400> 22  
gtaaaacgac ggccag

16

<210> 23

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer T7 promoter

<400> 23  
attatgctga gtgatatccc

20

<210> 24

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer BGH reverse

<400> 24  
tagaaggcac agtcgagg

18